



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/539,653	06/14/2005	Dirk Bald	ZAHFRI P754US	6640
20210	7590	05/18/2007		
DAVIS & BUJOLD, P.L.L.C. 112 PLEASANT STREET CONCORD, NH 03301			EXAMINER KING, BRADLEY T	
			ART UNIT	PAPER NUMBER
			3683	
			MAIL DATE	DELIVERY MODE
			05/18/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

Application No.

10/539,653

Applicant(s)

BALD, DIRK

Examiner

Bradley T. King

Art Unit

3683

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 26 February 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 13-22 and 24-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 13-22 and 24-32 is/are rejected.
- 7) ☐ Claim(s) - \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 20 and 31 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claims 20 and 31 have been amended to require "piezo-electric sensing devices". The original disclosure fails to support the recited sensing devices, nor is it clear what is encompassed by the term. Therefore, the limitation constitutes new matter.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 16, and 27 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Art Unit: 3683

Claims 16 and 27 recite "is one of directly incorporated into a motor unit, and the motor control unit and the brake control unit are connected to each other through a bus system". It is not clear what alternatives (note "one of" implies alternative recitations) are required by the claim language.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 13-22 and 24-32 are rejected under 35 U.S.C. 102(b) as being anticipated by Vikman et al (US# 2001/0003401).

Vikman et al discloses all the limitations of the instant claims including; at least one electrically actuated service brake 36 and at least one motor brake of an electric motor 6, the electrically actuated service brake being controlled as a function of braking action of the motor brake and a specification of a driver, and the braking action of the motor brake is evaluated on a basis of information from a position/rotational speed sensor 38 of the motor brake. See [0036-0037] and [0047].

Regarding claim 14, note the brake control unit is directly incorporated into vehicle control unit 24.

Regarding claim 15, note the units are spatially integrated into one apparatus (for instance, the vehicle can be considered one apparatus)

Regarding claims 17 and 28, note figure 4 and [0042].

Regarding claim 18, Vikman discloses a mechanical or emergency actuation system as broadly recited.

Regarding claim 19, see [0039].

Regarding claim 20, Vikman et al disclose an electromagnetic brake.

Regarding claim 22, the electromagnetic brake inherently assumes a braking force of either full brake or zero braking force depending on the manner in which it is biased.

Claims 13-18, 24-29 and 32 are rejected under 35 U.S.C. 102(b) as being anticipated by Hashiba et al (US# 2002/0116101).

Hashiba et al discloses all the limitations of the instant claims including; at least one electrically actuated service brake 30 and at least one motor brake 28 of an electric motor, the electrically actuated service brake being controlled as a function of braking action of the motor brake and a specification of a driver 26, and the braking action of the motor brake is evaluated on a basis of information from a position/rotational speed sensor 22 of the motor brake. See [0019-0021] and [0035-0037].

Regarding claim 14, note the brake control unit is directly incorporated into vehicle control unit 14.

Regarding claim 15, note the units are spatially integrated into one apparatus (for instance, the vehicle can be considered one apparatus)

Regarding claim 16, see [0020].

Regarding claim 17, note step 80.

Regarding claim 18, Hashiba et al discloses a mechanical or emergency actuation system as broadly recited.

### ***Response to Arguments***

Applicant's arguments filed 2/26/2007 have been fully considered but they are not persuasive.

Regarding Vikman et al, note that paragraph [0037] discloses that "the support wheel brake contribute with the remaining part of the required braking torque S. Depending on the type of operation percentage distribution of the contributions may vary some". Thus, the total braking torque is dependent on the pedal depression, but the supplemental brake contribution is a "function" of the motor brake torque as broadly recited.

Regarding the features of "the brake control unit can depending on the efficiency of the motor brake and the service brake, combine the two brakes in the most effective combination", noted in applicant's arguments, these features are narrower than the claimed invention.

Regarding Hashiba et al, the wheel speed sensor is indicative of motor speed due to the connection of the motors to the wheels. The wheel speed/vehicle speed is

Art Unit: 3683

utilized to determine regenerative braking limits. Note paragraph [0038] discusses modifying the friction braking as a function of the motor braking.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

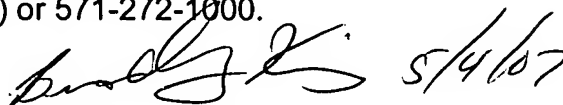
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bradley T. King whose telephone number is (571) 272-7117. The examiner can normally be reached on 11:00-7:30 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Siconolfi can be reached on (571) 272-7124. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3683

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Bradley T King  
Primary Examiner  
Art Unit 3683

BTK